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## 1. Introduction

Senova's Photometers are portable robust batteryoperated pocked size photometers.

They are suitable for the quantitative measurement of 3Dimmunofiltration Assays, ABICAP® Mikrocolumn assays or standard photometric assays.

They can be operated in laboratory environments as well as in field situations. Calibration data and measurement data can be transferred and stored via the built-in chip card reader.



## 3. Measurement

The Senova Photometer support two measurement modes: the general mode (from older versions) and the individual reference mode which offers a more precise measurement.

Use individual reference mode to calibrate each column instead of using a general blank.

### 3.1 general reference mode

- Choose [1] in main menu to enter the general reference mode.

You will be warned if memory is disabled.

**warning: in that case the Photometer will not store any values!**

- Confirm the first screen („press ID...”) pressing enter.

- Insert the Senova “Blank” column and press calibrate.

**Please make sure that the measurement chamber is closed by locking cap!**

The Photometer will show calibration intensity and store this value if memory is enabled (see 4. Memory).

- Remove the Senova “Blank” column from chamber and insert your sample column after completing the assay.

- Press [measure] to start measurement process.

- After two seconds, sample values will be shown at display.

If no chip-card is inserted, optical density (OD) will be shown.

If assay related chip-card is available, concentration will be displayed in according units.

- Press [measure] to read out the next sample column.

## 5. Technical data

Detector:	Silizium Photodiode
Cuvettes:	ABICAP® Microcolumns Round Cuvettes Ø 8mm, length 47mm
Light Source:	LED
Wavelength	530nm
integration time:	2sec
Meas. modes:	general ref., individual ref.
Battery:	4 x 1,5 VDC AA Batteries for approx. 8h operation time
Power supply:	Plug-in Powersupply 100VAC-264VAC /12V/0.8ADC
Interfaces:	1x RS232, 3-pin, I2C-hipkard reader 32/64 kBit
Display:	LCD-Display, 4 lines x16 characters, backlit
Keypad:	numeric keypad + operation keys
Printer:	Connection via IR
Measures:	180mm x 200mm x 40mm (wxdxh)
Weight:	Approx. 300g
Op. conditions:	Temperature +10°C to +30 °C relative humidity 5%rH-80%rH
Certificate :	CE

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- Exit the general reference mode by pressing [ID] as mentioned before.

**Note: If Memory is enabled, up to 96 readings can be stored with Calibration intensity and OD.**

### 3.2 individual reference mode

- Choose [2] in main menu to enter individual reference mode.

You will be warned if memory is disabled.

**warning: in that case the Photometer will not store any values!**

- Set the number of samples and define an order of samples in your AbiCap frame. Press [enter] to continue.

- Insert your first unstained column before adding substrate. Press [calibrate]

**Please make sure that the measurement chamber is closed by locking cap!**

- continue with following samples as with the first one.

- Finish the assay after calibrating all columns

- Insert sample 1 as mentioned on display and press [measure]

After two seconds sample values will be shown at display.

If no chip-card is inserted, optical density (OD) will be shown.

If assay related chip-card is available, concentration will be displayed in according units.

- Press [measure] to read out the next sample column.

- Press [enter] after reading the last column to get back to main menu.

# Senova Photometer user manual



## 4. Memory

The Senova Photometer provides an non-volatile internal memory to store up to 96 readings including calibration intensity and optical density. Using a computer with serial port (e.g. COM1) it is possible to import the stored values directly to Senova ReaderAssistant (See also Senova ReaderAssistant manual)

*Factory setting for memory is ,enabled'.*

### 4.1 Memory options

- Press [3] in main menu to enter memory options menu.

#### 4.1.1 memory disabled

If memory is disabled you may enabled it pressing [1] or keep memory disabled pressing [ID]  
Pressing [1] will enable memory and lead to memory enabled menu.

#### 4.1.2 memory enabled

If memory is enabled you can  
Press [1] to view memory status: the count of stored and remaining values will be shown. (press [ID] to exit)

Press [2] to disable memory

Press [3] to erase memory

**attention: all data in memory will be deleted**

- Press [ID] to get back to main menu.

## 2. Parts & Ports

